

Experts: Flooding puts flat Florida at risk

Climate summit discusses data, plans to prepare for future storms

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PUNTA GORDA — Speaking to a crowd of more than 100 on Wednesday, Doug Marcy stressed Florida may not see massive flooding in the immediate future — but long-term projections still have consequences for coastal communities.

“One foot of flooding can change the entire estuary system,” Marcy said, pointing to the lowlying, flat terrain of the state.

Scholars and residents from across the southwest shoreline gathered in Punta Gorda on Wednesday to attend the 2024 Southwest Florida Climate Summit.

The summit hosted a series of talks from experts in climate observation in the Charlotte Harbor Event and Conference Center, covering topics from climate tracking to post-Hurricane Ian resiliency.

This year’s summit was hosted by the Coastal and Heartland National Estuary Partnership. It continues Thursday.

Jennifer Hacker, CHNEP’s executive director, noted in a previous news release that 2023 was “the hottest year on record globally” and saw Hurricane Idalia sweep through Southwest Florida, similar to Hurricane Ian in 2022.

Sen. Marco Rubio spoke at the conference via a pre-recorded message, as did Shannon Estenoz, assistant secretary for Fish, Wildlife and Parks under the U.S. Department of the Interior.

Curtis Osceola, chief of staff for the Miccosukee Tribe of Indians of Florida, also spoke at the summit.

Most of the summit consisted of presentations from experts in environmental science, followed by question-and-answer sessions.

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Mark Thompson of the Sanibel-Captiva Conservation Foundation cited the growth of algae and seagrass in recent years due a rise in temperatures and a related lack of colder weather to cause dieback.

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Marcy spoke on behalf of his colleagues at the National Oceanic and Atmospheric Administration and its Office of Coastal Management.

He was joined by Mark Thompson of the Sanibel-Captiva Conservation Foundation and John Stamm from the U.S.

Many of those dunes that were still on the shoreline were often overwashed or inundated by the storm surge from Ian — that is, either the surge was large enough to get over lowlying dunes, or weak dunes were washed out entirely.

And as bad as the flooding that the surge brings is, the drained water from the ebb of waters can be just as dangerous — taking water out of existing channels and causing erosion along shorelines.

Savarese said he and his colleagues noted they found seawalls served the “unintended purpose” of keeping

Geological Survey to present data on projecting future changes.

During a question-and-answer session, Marcy was asked about skepticism from the public that 1 foot of sea level rise would have an impact beyond coastal areas. He replied some coastal areas would be better able to endure that kind of change — for instance, the rocky shores of Maine that come with some upfront coastal elevation.

Florida, on the other hand, is famously flat not only at the coast but inland as well, putting land near waterways at risk.

When another audience member asked if there was any risk of saltwater intrusion into freshwater aquifers, Marcy and Stamm said that there were programs in place to monitor changes in the aquifers.

However, when saltwater enters aquifers — usually aided by canals bringing storm surge inland — the composition of the water can be at risk and the saltwater can push the freshwater up to a higher elevation.

“That’s the kind of things that are being considered,” Stamm said during the Q& A session.

In the afternoon session, Michael Savarese, of Florida Gulf Coast University, noted Hurricane Ian brought an unprecedented storm surge to places like Fort Myers and Sanibel Island.

The best defenses against the storm surge would have come from natural barriers like sand dunes or artificial seawalls.

Unfortunately, Savarese said, the beaches around much of Southwest Florida are “sediment starved” and existing dunes may be built over for coastal structures.

“So our ‘fortress walls’ have been compromised by nature and human development,” he said during his presentation.

water in as well out, meaning that ebb was also limited by presence.

Audience members said they found the information provided at the summit to be helpful and hopeful as Florida faces increasingly extreme weather year after year.

Laura Rider drove up from St. James City on Pine Island — an area hit heavily by Hurricane Ian — to attend the summit.

She said she was particularly impressed with Osceola’s appeal to share the Miccosukee Tribe’s experience with Florida weather, though she found all the experts to be “very knowledgeable.”

Fort Myers resident Ensign Cowell said the information shared at the conference would go a long way to convincing climate change skeptics that there were solid ways to protect the environment and people.

“People know that something is happening,” he said.

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Audience members listen to a presentation from Doug Marcy of the National Oceanic and Atmospheric Administration (NOAA) on coastal management and flooding prediction.

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